

10/533309

JC17 Rec'd PCT/PTO 29 APR 2005

PRELIMINARY AMENDMENT

Application No.: National Stage Entry of PCT/JP03/13498
Attorney Docket No.: Q87635

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1. (currently amended): A curable composition characterized by comprising:
an organic polymer (A1) having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds in which the one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds are silicon-containing functional groups each having three or more hydrolyzable groups on one or more silicon atoms thereof; and

a component which is selected from the group consisting of (a) a silicate (B), (b) a tin carboxylate (C1) in which the α-carbon of the carboxyl group is a quaternary carbon atom, (c) a tin carboxylate (C) and an organotin catalyst (D), (d) a non-tin catalyst (E), and (e) a microballoon (F).

Claim 2. (currently amended): The curable composition according to claim 1, characterized in that wherein the component is component (a) and the silicate (B) is a condensate of a tetraalkoxysilane.

Claim 3. (currently amended): The curable composition according to claim 1 or 2, characterized by wherein the component is component (a) and further comprising a tin carboxylate (C).

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Claim 4. (currently amended): A curable composition characterized by according to claim 1, wherein the component is component (b) comprising:

~~an organic polymer (A1) having one or more silicon containing functional groups capable of cross linking by forming siloxane bonds in which the one or more silicon containing functional groups capable of cross linking by forming siloxane bonds are silicon containing functional groups each having three or more hydrolyzable groups on one or more silicon atoms thereof; and~~

~~a tin carboxylate (C1) in which the α carbon of the carboxyl group is a quaternary carbon atom.~~

Claim 5. (currently amended): A curable composition characterized by according to claim 1, wherein the component is component (c) comprising:

~~an organic polymer (A1) having one or more silicon containing functional groups capable of cross linking by forming siloxane bonds in which the one or more silicon containing functional groups capable of cross linking by forming siloxane bonds are silicon containing functional groups each having three or more hydrolyzable groups on one or more silicon atoms thereof;~~

~~a tin carboxylate (C); and~~

~~an organotin catalyst (D).~~

Claim 6. (currently amended): A curable composition characterized by according to claim 1, wherein the components is component (d) comprising:

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~~an organic polymer (A1) having one or more silicon containing functional groups capable of cross linking by forming siloxane bonds in which the one or more silicon containing functional groups capable of cross linking by forming siloxane bonds are silicon containing functional groups each having three or more hydrolyzable groups on one or more silicon atoms thereof; and~~

~~a non tin catalyst (E).~~

Claim 7. (currently amended): The curable composition according to claim 6, characterized in that ~~wherein~~ the non-tin catalyst is one or more selected from a carboxylic acid, a metal carboxylate other than a tin carboxylate and an organic titanate.

Claim 8. (currently amended): The curable composition according to claim 6, characterized in that ~~wherein~~ the non-tin catalyst is a catalyst which comprises a carboxylic acid and an amine compound.

Claim 9. (currently amended): The curable composition according to claim 7 or 8, characterized in that ~~wherein~~ the carboxylic acid is a carboxylic acid in which the α -carbon atom of the carboxyl group is a quaternary carbon atom.

Claim 10. (currently amended): A curable composition characterized by according to claim 1, wherein the component is component (e)-comprising:

~~an organic polymer (A1) having one or more silicon containing functional groups capable of cross linking by forming siloxane bonds in which the one or more silicon containing functional groups capable of cross linking by forming siloxane bonds are silicon containing~~

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~~functional groups each having three or more hydrolyzable groups on one or more silicon atoms thereof; and~~

~~a microballoon (F).~~

Claim 11. (currently amended): A curable composition characterized by comprising: an organic polymer (A1) having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds in which the one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds are silicon-containing functional groups each having three or more hydrolyzable groups on one or more silicon atoms thereof, and the proportion of said organic polymer in the total amount of the curable composition being 5 to 28 wt%.

Claim 12. (currently amended): The curable composition according to ~~any one of claims 1 to 11, characterized in that claim 1 or 11, wherein~~ the organic polymer having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds is an organic polymer obtained by an addition reaction between an organic polymer having one or more unsaturated groups introduced into the terminals thereof and a hydrosilane compound represented by the general formula (1):



where X represents a hydroxy group or a hydrolyzable group, and three X's may be the same or different.

Claim 13. (currently amended): The curable composition according to ~~any one of claims 1 to 12, characterized in that claim 1 or 11, wherein~~ the one or more silicon-containing

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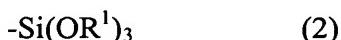
functional groups capable of cross-linking by forming siloxane bonds each are a trimethoxysilyl group or a triethoxysilyl group.

Claim 14. (currently amended): The curable composition according to ~~any one of claims 1 to 12, characterized in that~~claim 1, wherein the one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds each are a group represented by the general formula (2):

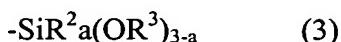


where three R¹'s each are independently a monovalent organic group having 2 to 20 carbon atoms.

Claim 15. (currently amended): A curable composition ~~characterized by~~ comprising: an organic polymer (A2) having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds in which the one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds are represented by the general formula (2):



where three R¹'s each are independently a monovalent organic group having 2 to 20 carbon atoms~~R¹'s are the same as described above; and a component which is selected from the group consisting of (a) an aminosilane coupling agent (G) having a group represented by the~~ general formula (3):



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where a R²'s each are independently a monovalent organic group having 1 to 20 carbon atoms, (3-a) R³'s each are independently a monovalent organic group having 2 to 20 carbon atoms, and a represents 0, 1 or 2 and (b) an epoxy resin.

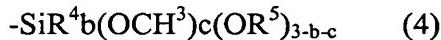
Claim 16. (currently amended): A curable composition characterized in that the curable composition is obtained by aging a composition comprising:

an organic polymer (A2) having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds in which the one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds are represented by the general formula (2):



~~where R¹'s are the same as described above~~ where three R¹'s each are independently a monovalent organic group having 2 to 20 carbon atoms; and

an aminosilane coupling agent (H) having a group represented by the general formula (4):



where b R⁴'s each are independently a monovalent organic group having 1 to 20 carbon atoms, (3-b-c) R⁵'s each are independently a monovalent organic group having 2 to 20 carbon atoms, b represents 0, 1 or 2, and c represents 1, 2 or 3; the relation, 3-b-c ≥ 0, is to be satisfied.

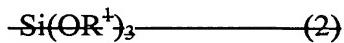
Claim 17. (currently amended): A curable composition characterized by according to claim 15, wherein the component is component (b)-comprising:

~~an organic polymer (A2) having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds in which the one or more silicon-containing~~

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~~functional groups capable of cross-linking by forming siloxane bonds are represented by the general formula (2):~~



~~where R¹'s are the same as described above; and~~

~~an epoxy resin (I).~~

Claim 18. (currently amended): A curable composition characterized by comprising a polyoxyalkylene polymer (A3) having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds in which the one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds are represented by the general formula (2):



~~where R¹'s are the same as described above where three R¹'s each are independently a monovalent organic group having 2 to 20 carbon atoms; and~~

a (meth)acrylate copolymer (A4) having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds.

Claim 19. (currently amended): The curable composition according to claim 18, characterized in that ~~wherein~~ the one or more silicon-containing functional groups of the (meth)acrylate copolymer are the groups represented by the general formula (2):



~~where R¹'s are the same as described above where three R¹'s each are independently a monovalent organic group having 2 to 20 carbon atoms.~~

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Claim 20. (currently amended): A curable composition characterized by comprising a saturated hydrocarbon polymer (A5) having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds in which the one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds are represented by the general formula (2):



where R¹'s are the same as described above where three R¹'s each are independently a monovalent organic group having 2 to 20 carbon atoms.

Claim 21. (currently amended): A curable composition characterized by comprising a (meth)acrylate copolymer (A6) having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds in which the one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds are represented by the general formula (2):



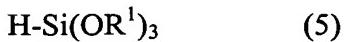
where R¹'s are the same as described above where three R¹'s each are independently a monovalent organic group having 2 to 20 carbon atoms.

Claim 22. (currently amended): The curable composition according to any one of claims 14, 15, 16, 18, 20 and to 21, wherein characterized in that the organic polymer having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds is an organic polymer obtained by an addition reaction between an organic polymer having one

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or more unsaturated groups introduced into the terminals thereof and a hydrosilane compound represented by the general formula (5):



where R¹'s are the same as described above where three R¹'s each are independently a monovalent organic group having 2 to 20 carbon atoms.

Claim 23. (currently amended): The curable composition according to any one of claims 1, 11, 15, 16, 18, 20 and 21, wherein to 22, characterized in that the organic polymer having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds is an organic polymer which substantially does not contain an amide segment (-NH-CO-) in the main chain skeleton thereof.

Claim 24. (currently amended): The curable composition according to any one of claims 1, 11, 15, 16, 18, 20 and 21, wherein to 23, characterized in that the one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds each are a triethoxysilyl group.

Claim 25. (currently amended): The curable composition according to any one of claims 1, 11, 17, 18, 20 and 21, to 14 and 17 to 24, characterized by further comprising an aminosilane coupling agent.

Claim 26. A one-part curable composition according to any one of claims 1, 11, 15, 16, 18, 20 and 21, to 25, characterized by further comprising a dehydrating agent.

Claims 27-76. (canceled).

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Claim 77. (new): The curable composition according to claim 1, wherein the component is component (a).

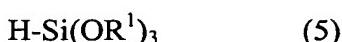
Claim 78. (new): The curable composition according to claim 15, wherein the component is component (a).

Claim 79. (new): The curable composition according to claim 14, wherein the one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds each are a group represented by the general formula (2):



where three R¹'s each are independently a monovalent organic group having 2 to 20 carbon atoms.

Claim 80. (new): The curable composition according to claim 79, wherein the organic polymer having one or more silicon-containing functional groups capable of cross-linking by forming siloxane bonds is an organic polymer obtained by an addition reaction between an organic polymer having one or more unsaturated groups introduced into the terminals thereof and a hydrosilane compound represented by the general formula (5):



where three R¹'s each are independently a monovalent organic group having 2 to 20 carbon atoms.